WORLD INTELLECTUAL PROPERTY ORGANIZATION International Bureau



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6: C12N 15/12, 15/10, 15/62, C07K 14/72, 16/00, C12Q 1/68, G01N 33/577

A1

(11) International Publication Number:

WO 99/11785

(43) International Publication Date:

11 March 1999 (11.03.99)

(21) International Application Number:

PCT/GB98/02630

(22) International Filing Date:

2 September 1998 (02.09.98)

(30) Priority Data:

9718455.0

2 September 1997 (02.09.97)

GB

(71) Applicant (for all designated States except US): ROWETT RESEARCH SERVICES LIMITED [GB/GB]; Greenburn Road, Bucksburn, Aberdeen AB21 9SB (GB).

(72) Inventor; and

(75) Inventor/Applicant (for US only): McGREGOR, Duncan [GB/GB]; 6 Balcairn Cottages, Oldmeldrum, Aberdeenshire AB51 0EU (GB).

(74) Agent: MURGITROYD & COMPANY; 373 Scotland Street, Glasgow G5 8QA (GB).

(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, HR, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).

Published

With international search report.

Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.

(54) Title: CHIMERIC BINDING PEPTIDE LIBRARY SCREENING METHOD

(57) Abstract

There is described a method of isolating nucleotide sequences encoding target peptides from DNA libraries using DNA binding proteins to link the peptide to the sequence which encodes it. DNA libraries are prepared from cells encoding the protein of interest, or from synthetic DNA, and inserted into, or adjacent to, a DNA binding protein in an expression vector to create a chimeric fusion protein. Incorporation of the vector DNA into a carrier package, during expression of the chimeric fusion protein, results in the production of a peptide display carrier package (PDCP) displaying the DNA-bound fusion protein on the external surface of the carrier package. Employment of affinity purification techniques results in the PDCP particles containing sequences encoding the desired peptide to be selected and the desired nucleotide sequences obtained therefrom.